

REMARKS

In the Office Action of July 25, 2003, claims 1-18 were rejected under 35 U.S.C. § 103 (a) as being unpatentable over Palmer (U.S. Patent No. 6,494,203 B1) in view of Linder (U.S. Patent No. 4,774,940).

Applicants respectfully traverse the § 103 (a) rejection to claim 1 over Palmer in view of Linder. When one skilled in the art views prior art references in their entirety, he or she must have some motivation to combine one reference with the other to solve a problem for the resulting design to be obvious under § 103 (a). Here, when one skilled in the art views both Palmer and Linder, he or she is not motivated to produce a connector for a respiratory assembly as claimed in claim 1.

Palmer discloses an adaptor that has couplings which include swivel fittings in order to provide for an improved ventilating apparatus (see Palmer at column 3, lines 8-12; and column 9, lines 10-17). The swivel couplings disclosed in Palmer are all of a single uniform diameter, and have ventilating tubing either compression fit over the swivel couplings or inserted into a hollow, single diameter sleeve of the swivel coupling (see Palmer at column 5, lines 14-16; and Fig. 1 which shows couplings 88 and 88'). The entire point of Linder, on the hand, is to provide an adaptor that has a series of male input sections that are of different external stepped diameters, and a series of internal diameter bore portions that are of different diameters (see Linder at column 2, lines 20-23, and 30-34). The stepped diameter couplings of Linder do not rotate, but are rigid connections, unlike the single uniform diameter couplings of Palmer which are

swivel connections. Incorporation of the stepped diameter, rigid couplings of Linder into the uniform diameter, swiveling coupling of Palmer would frustrate the entire purpose of Palmer, and likewise the incorporation of the couplings of Palmer into Linder would equally frustrate the entire point of Linder. As such, it would not have been obvious for one skilled in the art to combine these two references with one another because doing so would produce an adaptor having a coupling that would not work for its intended purpose. Each reference takes a mutually exclusive path to reach a different solution (uniform diameter, swivel couplings versus stepped diameter, rigid couplings) to a similar problem (an improved adaptor), and therefore by implication each reference teaches away from combining itself with the other. As such, Applicants respectfully submit that the adaptor disclosed in Linder is not combinable with the adaptor disclosed in Palmer, and as such it would not have been obvious for one skilled in the art to combine these two references.

Linder discloses a connector that has a bore portion that may be bent at a 90° angle, or alternatively may extend in a straight line or may be curved (see Linder at column 1, lines 16-21). The connector disclosed in Fig. 4 of Linder has a bore 60 that is curved and changes direction at an angle of 135° from the female output section 56 to the male input section 52. Applicants have provided a marked up copy of Fig. 4 of Linder that shows the bore 60 changing direction at an angle of 135°. Additionally, Linder discloses an embodiment in Fig. 6 where the connector 81 has a pair of male sections 82, 83 and a female section 86 in the shape of a Y (see Linder at column 4, lines 45-47). Applicants have also

provided a marked up copy of Fig. 6 which shows the bore 90 changing direction at an angle of 150° between the female section 86 and the male section 82, 83. Linder therefore does not disclose a passage that changes direction at a single constant angle of approximately 120°, as claimed in claim 1 of Applicants application. Linder only discloses a bore 40 that changes direction at an angle of 90° (Fig 3), a bore 60 that changes direction at an angle of 135° (Fig 4), and a pair of bores 90 that change direction at an angle of 150° (Fig 6). Nowhere does Linder teach that the bore in the connector may change direction at any angle other than the ones disclosed, and specifically Linder does not teach the bore changing direction at an angle of 120°. Linder only discloses an angle of 135° and a pair of 150° angles. There is no suggestion or motivation to one skilled in the art that the connector may be configured with a bore that changes direction at an angle of approximately 120°.

This being the case, incorporation of the teachings of Linder into Palmer would not result in a connector as set forth in claim 1 of Applicants' application, even assuming such combination would have been obvious to one skilled in the art. The references taken alone or in combination do not disclose a connector that has a passage that changes direction at a single constant angle of approximately 120°. Incorporation of the connector of Linder into Palmer would result in a device that, at most, has a bore that changes direction at an angle of 135°, even assuming that such combination of references are proper. Applicants submit that an angle of approximately 120° allows for greater patient comfort and ease of use as compared to known devices, and is a new and unexpected result

in performance of medical connectors (see page 8, lines 3-7 of Applicants' application).

Provision of an angle of approximately 120° is not simply a matter of design choice, but provides a device that has improved ease of use and patient comfort over known devices. There is no suggestion or teaching in the references that the angle has any effect on patient comfort or ease of use, and thus one skilled in the art would not be motivated to change or delineate from angles of conventional devices, such as Linder.

In order to arrive at claim 1 of Applicants' application, one skilled in the art would have to combine the disclosure of Linder which teaches towards rigid, stepped diameter couplings into the disclosure of Palmer which teaches swiveled, uniform diameter couplings, even though both references disclose different types of couplings and incorporation of one into the other would completely frustrate the entire purpose of both references. Next, one skilled in the art would have to modify the teachings of Linder such that the passage of Linder changes direction at a single constant angle of approximately 120°, even though Linder does not disclose such an angle nor disclose any reasons why such an angle would be desired or provide any motivation for using angles other than the ones specifically disclosed in the reference. Finally, one skilled in the art would have to ignore the fact that not one, but both references explicitly disclose adaptors that are elbow adaptors having 90° angles, and substitute in its place an approximately 120° angle for some unknown reason. Applicants submit that such a series of steps is not obvious to one having ordinary skill in the art.

As such, Applicants respectfully submit that claim 1 and all claims which depend from claim 1 (claims 2-8) are in condition for allowance. Their rejections being made moot due to the allowance of independent claim 1.

As stated, claim 9 was rejected under 35 U.S.C. § 103 (a) as being unpatentable over Palmer in view of Linder. Applicants respectfully submit that claim 9 defines over the cited references. The combination of references does not disclose a connector that has a first and second axis where a single constant angle of about 120° exists between the first and second axis. Support for this amendment may be found in at least originally filed claim 10 of the present application. Although not exact, this language is similar to that claimed in claim 1 of Applicants application and Applicants respectfully submit that claim 9 defines over the combination of Linder and Palmer for essentially the same reasons as discussed above with respect to claim 1. Further, all claims which depend from claim 9 (claims 11-17) are also in condition for allowance. Their rejections being made moot due to the allowance of claim 9.

As stated, claim 18 was rejected under 35 U.S.C. § 103 (a) as being unpatentable over Palmer in view of Linder. Applicants respectfully traverse the rejection of claim 18. Claim 18 calls for a body that has an about 120° single constant bend between a first end and a second end. This structure is not disclosed in either Palmer or Linder. As stated, Linder discloses a bend that is 135°, and a pair of bends that are 150°. There is no teaching in Linder or suggestion to one skilled in the art to modify the connector such that it has a body with an about 120° single constant bend between the first end and the

second end. Linder does not state that the body may have a bend at any possible angle, and does not suggest that the body may have a bend of any angle other than the angles disclosed in the reference. As such, Applicants respectfully submit that claim 18 defines over the combination of Linder and Palmer and is in condition for allowance.

With the present Amendment, Applicants submit that all pending claims are allowable and that the application is in condition for allowance. Favorable action thereon is respectfully requested. The Examiner is encouraged to contact the undersigned at his convenience to resolve any remaining issues.

Respectfully submitted,

DORITY & MANNING, P.A.

August 29, 2003
Date

Neal P. Pierotti
Neal P. Pierotti
Reg. No. 45,716
P.O. Box 1449
Greenville, SC 29602-1449
(864) 271-1592
FAX (864) 233-7342